APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,393	10/29/2003	Colt R. Correa	2485-000001/CPA	6397

27572 7590 04/09/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303	EXAMINER
	WEI, ZHENG

ART UNIT	PAPER NUMBER
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>29 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *11/09/2006;01/26/2005*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the application filed on 10/29/2003.

2.   Claims 1-15 are pending and have been examined.

Oath/Declaration

3.   The Office acknowledges receipt of a properly signed oath/declaration filed on

April 08, 2004.

Priority

4.   The priority date considered for this application is 10/29/2003.

Information Disclosure Statement

5.   The information disclosure statements filed 01/26/2005 and 11/09/2006 have

been placed in the application file and the information referred to therein has

been considered.

Drawings

6.   The drawings filed on April 08, 2004 are accepted by the Examiner.

Specification

7.   The application status needs to be updated in the section: CROSS-REFERENCE

TO RELATED APPLICATION

Claim Objections

8.   Claims 2 and 8 are objected to because of the following informalities:

Claims 2 and 8: Claim sentences seem to be incomplete (see for example, p.16,

claim 2, "last line "...for the software program or"). For the purpose of compact

prosecution, the examiner treats it as –for the software program.--

Appropriate correction is required.

Claim Rejections - 35 USC § 101

9.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

10.   Claims 10-15 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 10: Claim 10 claims a system, which comprises an instruction locator

and an instruction replacement component. However, both of these components

are software components implemented by instruction sequences. Such claimed

software module/programs are software program listings per se and they do not

define any structural and functional interrelationships between the computer

program and other claimed elements of a computer, which permit the computer

program's functionality to be realized. Therefore, claim 10 is not statutory. See

MPEP 2106.01(I)

Claims 11-15: Claims 11-15 are dependent claims of claim 10. These claims all

fail to remedy the 35 USC 101 nonstatutory problem of claim 10.

--*These rejections can be overcome by adding computer hardware components e.g.,*

memory, and processor into the claims that permit the computer program's functionality

to be realized.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

12.   Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by <u>Karp</u>

(Karp et al., US 2003/0061598)

Claim 1:

<u>Karp</u> discloses a method for controlling the value of a RAM variable inside an

executable program, comprising:

- presenting a software program in executable form (object code) and having a

    plurality of machine instructions of a finite quantity of fixed lengths (see for

    example, Fig.1 element 60 and related text; also see p.1, [0019], lines 1-3,

"The object code includes a sequence of instructions I1 though In in object

code");

- identifying at least one machine instruction that accesses a variable defined in

  random access memory associated with the software program (see for

  example, Fig.1, element 14, Fig.2, element 15, "Object Code Adapter" and

  related text; also see p.2, [0031], "uses the present techniques to adapt a set

  of object code");

- defining a replacement instruction for the at least one machine instruction

  (see for example, Fig.1, element 14, "O Object Code Adapter" and related

  text; also see p.1, [0020], "the object code adapter adapts the object code by

  providing hit instructions") and

- replacing the at least one machine instruction in the executable form of the

  software program with the replacement instruction (see for example, Fig.1,

  element 62 and related text; also see; p.1, [0021], "replaces the instruction I3

  with a break instruction B1").

Claim 2:

Karp further discloses the method of claim 1 wherein the replacement instruction

is further defined as a branch instruction (branch or return instruction) that

references an address outside an address space for the software program (see

for example, Fig.1, element 64 and related text; also see, p.1, [0022], "The hint

code is code to be executed by the processor when the break instruction B1 is

executed")

Claim 3:

Karp also discloses the method of claim 1 wherein the replacement instruction is

further defined as a no operation instruction (a branch prediction) (see for

example, p.2, [0024], "Another example of a hint instruction is a branch prediction

that specifies a likely result of a branch instruction in the sequence of instructions

I1 to In").

Claim 4:

Karp further discloses the method of claim 1 wherein the replacement instruction

is further defined as a instruction that can cause at least one of an interrupt and

an exception to occur in the microprocessor (see for example, p.2, [0030],

"process using a mechanism for handling break instructions which is built into the

process and a hint register contained in the processor").

Claim 5:

Karp further discloses the method of claim 1 wherein the step of identifying at

least one machine instruction further comprises

- determining location information for the at least one machine instruction within

    the software program (see for example, Fig.4, steps 110 "Examine the

Instruction Stream" and related text).

Claim 6:

Karp also discloses the method of claim 5 wherein the step of determining

location information further comprises

- identifying an address for the at least one machine instruction using the

  image of the executable containing the machine instructions that comprise the

  executable (see for example, Fig.2 elements 11 Processor, 20 Memory,

  element 18 and element 15 Object Code Adapter and related text; also see

  Fig.4, steps 110 "Examine the Instruction Stream" and related text).

Claim 7.

Karp further discloses the method of claim 6 wherein the step of replacing the at

least one machine instruction further comprises

- inserting the replacement instruction into a program memory image of the

  software program at said address (see for example, Fig.4, step 112, "Insert a

  Break Instruction into the Instruction Stream Where Therefore, it would have

  been obvious to one having ordinary skill in the art at the time the invention

  was made to Hint instruction is to be Executed" and related text).

Claim 8.

Karp also discloses the method of claim 2, wherein said branch instruction

references a set of relocation instruction residing outside an address space for

the software program (see for example, p.2, [0028] "the processor 10 may be

designed to branch to a predetermined address").

Claim 9.

Karp The method of claim 1 further comprises

- executing the executable form of the software program having the

  replacement instruction (see for example, p.2, [0032], ""for execution by the

  processor by inserting a set of break instructions").

Claims 10-15:

Claims 10-15 are system version for performing the claimed method as in claims

1-10 addressed above, wherein all claimed limitation functions have been

addressed and/or set forth above and certainly a computer system would need

to run and/or practice such function steps disclosed by reference above. Thus,

they also would have been obvious (see for example, Fig.5-6 and related text;

also see, p.4, lines 10-42).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- Lillich et al., (US 5,619,698) discloses a method and apparatus for

   patching operating systems.

- Peter Dawson (US 7,168,068 B2) discloses a dynamic software code

   instrumentation method and system.

- Kawai et al., (US 7,134,115 B2) discloses an apparatus, method and

   program for breakpoint setting.

- Robert Hundt (US 2004/0205720 A1) discloses an augmenting

   debuggers

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Zheng Wei whose telephone number is (571)

270-1059 and Fax number is (571) 270-02059. The examiner can normally be

reached on Monday-Thursday 8:00-15:00.

   If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW

TUAN DAM
SUPERVISORY PATENT EXAMINER